IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Goldberg, et al.	)
	) Group Art Unit: 2622
5	)
Serial No. 09/346,559	) Examiner:
	) Twyler M. Lamb
Filed: June 30, 1999	)
	)
10 For: System For Authenticating Hardcopy Documents	)
	)

SUPPLEMENTAL APPEAL BRIEF

15

Box AF
Assistant Commissioner for Patents
Alexandria, VA 22313

Sir:

20   <u>SUPPLEMENTAL BRIEF ON BEHALF OF GOLDBERG, ET AL.:</u>

      Appellant requests the reinstatement of an appeal from the Final Office

action mailed on October 8, 2003, in which currently pending Claims 1-23 stand

finally rejected. Prosecution was reopened with new grounds of rejection raised

in a non-final Office action mailed on April 22, 2004 in response to the filing of

25   an Appeal Brief on February 5, 2004. This Supplemental Appeal Brief is

submitted in triplicate in support of Appellant's request for reinstatement of the

appeal.

TABLE OF CONTENTS

1.   **REAL PARTY IN INTEREST**

This item is incorporated by reference from the earlier-filed Appeal Brief.

2.   **RELATED APPEALS AND INTERFERENCES**

5   This item is incorporated by reference from the earlier-filed Appeal Brief.

3.   **STATUS OF CLAIMS**

This item is incorporated by reference from the earlier-filed Appeal Brief.

10   4.   **STATUS OF AMENDMENTS**

This item is incorporated by reference from the earlier-filed Appeal Brief.
In addition, an Appeal Brief was filed on February 5, 2004. A non-final Office
action ("third Office action") was mailed by the USPTO on April 22, 2004, which
reopened prosecution after appeal. No amendments have been filed subsequent to
15   final rejection or reopening of prosecution.

5.   **SUMMARY OF INVENTION**

This item is incorporated by reference from the earlier-filed Appeal Brief.

20   6.   **ISSUES**

Three issues were originally presented on appeal, the first two issues of
which are now moot. Previously-raised Issue I, whether claims 1, 7, 11-19, 21
and 23 are anticipated by U.S. Patent No. 5,486,686 to Zdybel, Jr. et al.
("Zdybel") pursuant to 35 U.S.C. 102(b), and previously-raised Issue II, whether
25   claims 2-5, 20 and 22 are obvious over Zdybel and further in view of U.S. Patent
No. 5,157,726 to Merkle et al. ("Merkle") pursuant to 35 U.S.C. § 103(a), were
withdrawn in the third Office action. However, previously-raised Issue III,
whether claims 6 and 8-10 are obvious over Zdybel and further in view of U.S.

Patent No. 5,706,099 to Curry ("Curry") pursuant to 35 U.S.C. § 103(a), was raised again in the third Office action. Therefore, previously-raised Issue III remains as an issue on appeal.

As a result, there are two new issues and one previously-raised issue

5   presented on appeal in response the new grounds of rejection raised in the third Office action. First, whether claims 1, 7, 11-19, 21 and 23 are obvious over U.S. Patent No. 5,486,686 to Zdybel, Jr. et al. ("Zdybel") and in view of U.S. Patent No. 5,912,974 to Holloway et al. ("Holloway") pursuant to 35 U.S.C. 103(a) (Issue I). Second, whether claims 2-5, 20 and 22 are obvious over Zdybel in view

10   of Holloway and further in view of U.S. Patent No. 5,157,726 (Merkle et al.) pursuant to 35 U.S.C. § 103(a) (Issue II). Third, whether claims 6 and 8-10 are obvious over Zdybel and further in view of U.S. Patent No. 5,706,099 (Curry) pursuant to 35 U.S.C. § 103(a) (Issue III).

15   **7.   GROUPING OF CLAIMS**

A.   First Rejection Under 35 U.S.C. § 103(a) (Issue I).

Under Issue I, Appellant believes that the following groups of claims are separately patentable. Claims 1, 7, 11-19, 21 and 23 do not stand or fall together, but instead are grouped together as follows:

20   Group I: Claims 1, 7 and 11-17
     Group II: Claims 18 and 19
     Group II: Claims 21 and 23

An argument in support of the foregoing groupings of claims 1, 7, 11-19, 21 and 23 is provided below in Section 8(A)(1).

25   *B.   Second Rejection Under 35 U.S.C. § 103(a) (Issue II).*

Under Issue II, Appellant believes that the following groups of claims are separately patentable. Claims 2-5, 20 and 22 do not stand or fall together, but instead are grouped together as follows:

Group I: Claims 2-5

Group II: Claim 20

Group II: Claim 22

An argument in support of the foregoing groupings of Claims 2-5, 20 and 22 is

5   provided below in Section 8(B)(1).

C.   *Third Rejection Under 35 U.S.C. § 103(a) (Issue III).*

This item is incorporated by reference from the earlier-filed Appeal Brief.

8.   ARGUMENTS

10   A.   *First Rejection Under 35 U.S.C. § 103(a) (Issue I).*

Claims 1, 7, 11-19, 21 and 23 stand rejected under 35 U.S.C. 103(a) as

anticipated by Zdybel. To establish a *prima facie* case of obviousness: (1) there

must be some suggestion or motivation, either in the references themselves or in

the knowledge generally available to one of ordinary skill in the art, to modify the

15   reference or combine the reference teachings; (2) there must be a reasonable

expectation of success; and (3) the combined references must teach or suggest all

the claim limitations. MPEP § 2143. The combination of Zdybel and Holloway

fail to render 1, 7, 11-19, 21 and 23 obvious. Applicant traverses the rejection.

Initially, the examiner must show some teaching or suggestion to combine

20   references that supports their use in combination. *See, Ashland Oil, Inc. v. Delta*

Resins & Refracs., Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). The

absence of a suggestion to combine is dispositive in an obviousness

determination. *McGinley v. Franklin Sports, Inc.,* 262 F.3d 1339, 60 USPQ2d

1001 (Fed. Cir. 2001); *Bambro Lundia AB v. Baxter Healthcare Corp.,* 110 F.3d

25   1573, 42 USPQ2d 1378 (Fed. Cir. 1997). Conversely, finding similar elements in

one or more references does not automatically render an invention unpatentable,

nor may the invention be used as an instruction book on how to reconstruct the

invention from the art references. *See Panduit Corp. v. Dennison, Mfg. Co.,* 810

F.2d 1561, 1 USPQ2d 1593 (Fed. Cir. 1987). Finally, obviousness may not be

established via hindsight by picking and choosing from an art reference only so much of the reference as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. *Bausch & Lomb, Inc. v. Barnes-Hind, Inc.,* 796 F.2d 443, 230 USPQ 416 (Fed. Cir. 1986).

A *prima facie* case of obviousness has not been shown for Claims 1, 7, 11-19, 21 and 23. The claim groupings, Zdybel patent and Holloway patent will first be summarized, followed by a discussion of the patentability of claim Groups I, II and III.

1.   Grouping of Claims

Group I consists of claims 1, 7 and 11-17, which define a method for authenticating a hardcopy document. Support can be found in the specification on page 6, line 13 through page 9, line 13. In particular, claim 1 recites arranging in a memory a scanned representation of a hardcopy document and a digital encoding of an authentication token for rendering a signed and authenticated hardcopy document. The authentication token is encoded using embedded digital data that is machine readable only. *See, e.g.,* Spec. page 8, lines 17-22. As claims 1, 7 and 11-17 recite a method with steps supportable by the specification distinctively from other apparatus and method claims, Group I properly states a separately patentable claim group.

Group II consists of claims 18 and 19, which define a method for authenticating a hardcopy document. Support can be found in the specification on page 13, line 14 through page 17, line 21. In particular, claim 18 recites arranging in a memory a digital encoding of authentication data for rendering a *label* containing a digital encoding of the authentication data. *See, e.g.,* Spec. page 15, line 21 through page 16, line 11 ("notary stamp 612"). In contrast, claim 1 renders a signed and authenticated *hardcopy document.* As claims 18 and 19 recite a method with steps supportable by the specification distinctively from other apparatus and method claims, Group II properly states a separately

patentable claim group.

Group III consists of claims 21 and 23, which define a system for authenticating a scanned representation of a hardcopy document. Support can be found in the specification on page 5, line 3 through page 6, line 11. As claims 21

5 and 23 recite an apparatus with elements supportable by the specification distinctively from the other apparatus and method claims, Group III properly states a separately patentable claim group.

2.   Zdybel Reference ('686)

The Zdybel reference discloses hardcopy lossless data storage and

10 electronic document processing, which tightly couples hardcopy output to electronic documents for enabling hardcopy documents to be employed as an essentially lossless medium (Abstract; Col. 4, lines 20-41). Documents are converted into electronic bitmap representations and converted into elemental textual and graphical encodings by employing recognition software (Col. 7, line

15 66-Col. 8, line 1). The electronic representation is composed of probabilistic encodings, bitmap images, or both (Col. 8, lines 23-29). Bit-level digital data contents of the electronic document are converted into "glyph encodings," which are encodings representing distinctive markings with at least two distinguishable, machine-readable states (Col. 8, lines 40-47). The glyph encodings can be used to

20 recover data that affects the appearance of a document and data that is not inferable from the appearance of the document alone (Col. 9, lines 46-53). The glyph encoded data includes, by example, machine-readable descriptions of data points for structured graphics, algorithms utilized for performing computations for spreadsheets, hypertext pointer values, structural characteristics of the electronic

25 source document, the document editor used to prepare the source document, the file name and storage location of the electronic source document, and audit trail data for the electronic source document (Col. 10, lines 13-26). The glyph encodings are merged into an electronic document description file that causes the glyphs to be printed on the hardcopy output document (Col. 8, lines 47-50).

3.   Holloway Reference ('974)

The Holloway reference discloses an apparatus and method for authenticating printed documents, which involves logically dividing an original document in digital form into segments containing data and generating a digital form of each segment with a suitable digitizing method (Col. 2, lines 1-12). Each segment has substantially the same type of data (Col. 4, lines 30-35; Col. 5, lines 33-36). The apparatus proposes a set of rules for authenticating each segment, including rules for different types of segments, such as logos, text, tables, and images (Col. 4, lines 30-35; Col. 7, line 11-Col. 8, line 18). A digital form of the data contents is derived using the rules and a hash value of the rules used and the digital form is calculated (Col. 4, lines 36-40). A hash value for the document as a whole is obtained by calculating a hash value over the set of hash values for each segment (Col. 4, lines 41-44). A digital signature is generated from the hash value of the whole document (Col. 2, lines 13-15; Col. 4, lines 49-52). In turn, an authentication code containing the digital signature and the digital form, plus a hash value and rules, is generated (Col. 4, lines 53-56).

4.   Patentability of Group I Claims

First, there is no suggestion or motivation to modify or combine Zdybel and Holloway, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Zdybel teaches combining hardcopy output and electronic documents into a lossless communications medium (Abstract; Col. 4, lines 20-41) by encoding bit-level digital data content into glyph encodings (Col. 8, lines 38-50). The glyph encodings are not encoded or intended to provide authentication of the underlying hardcopy document. Rather, the glyph encodings represent the digital data content of ASCII, DDL or PDL encodings, which are determined by using recognition software to extract semantic information in the form of bit-level digital data contents from a document (Col. 7, line 66-Col. 8, line 4). A machine readable digital representation and a human readable rendering are then created on the same recording media using the same

printing process (Col. 4, lines 45-51).

Holloway teaches providing authentication of a document by attaching an authentication code to the original document (Col. 2, lines 5-7; Col. 4, lines 53-56; Col. 5, lines 44-55). The authentication code is based on a digital signature

5   that derives from hash values applied to a digital form of segment contents (Col. 4, lines 35-56). The segments are separately reproducible from digital form and the digital forms of the segments can include a manually entered name for a company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15).

10   One of ordinary skill in the art would not find a suggestion or motivation to modify or combine Zdybel with Holloway. Zdybel teaches robust and reliable recovery of information carried in hardcopy documents when transformed into an electronic format. Holloway teaches a process of validation that generates an appropriate digital form for each type of data contained in a document, wherein

15   segments that failed can be checked for damage or other conditions calling authenticity into question. Thus, the Zdybel and Holloway references are being improperly combined without a proper showing of a teaching or motivation to combine. MPEP § 2143.01 "The mere fact that prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless

20   the prior art suggests the desirability of the modification. *In re Fritch*, 974 F.2d 1260 (Fed. Cir. 1992).

Second, there would not be reasonable expectation of success. The expectation of success must be founded in the prior art and not in the applicant's disclosure. *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988). Zdybel teaches

25   creating a lossless communications medium, whereas Holloway teaches authenticating printed documents. More specifically, Holloway teaches generating an authentication code containing a digital signature calculated from hashes of individual hash values for digital forms of segments, whereas Zdybel teaches encoding bit-level digital data content into glyph encodings that can be

30   used to recover data. Combining the teachings of Zdybel with the teachings of

Holloway would thus provide a lossless printed document that substituted an authentication code for glyph encodings. However, each individual hash would potentially require a separate authentication rule and, as a result, the combination would fail to provide a method for authenticating a hardcopy document, per the

5   Group I claims.

Finally, the combined Zdybel and Holloway references fail to teach or suggest all the claim limitations. The Group I claims recite generating lossy compressed image data with the scanned representation of the hardcopy document. Support can be found in the specification on page 7, lines 11-19. In

10 contrast, Holloway fails to teach or suggest lossy compressed image data and instead teaches creating a range of digital forms of the segments, which include a manually entered name for a company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15). Although Holloway does teach creating a compressed

15 image, Holloway implicitly teaches away from *lossy* compression, which would not allow assurances of authenticity between the reproduced image and the original image. *See, e.g.,* Col. 2, lines 17-35 ("one segment may contain encoded information such as a photograph or a diagram which could be almost infinitely varied without noticeable change to the human eye"); Col. 8, lines 7-11.

20 The Group I claims also recite producing an authentication token with the lossy compressed image data; the authentication token including one of encrypted image data and hashed encrypted image data; and the hashed encrypted image data including the lossy compressed image data and an encrypted hash of the lossy compressed image data. Support can be found in the specification on page 8, lines

25 1-16. In contrast, Holloway fails to teach or suggest an authentication token including one of encrypted image data or hashed encrypted image data and instead teaches an authentication code containing the digital signature of the document, and the hash value, rules and digital form of each segments contents (Col. 4, lines 53-56). Although Holloway does teach creating a compressed image, Holloway

30 implicitly teaches away from *encrypted* image data, as individual segment

encryption would be unnecessary in light of the digital signature taken over the over the set of hash values for each individual segment. *See, e.g.,* (Col. 4, lines 41-44).

Lastly, the Group I claims recite arranging in the memory the scanned representation of the hardcopy document with a digital encoding of the authentication token for rendering at a printer a signed and authenticated hardcopy document. Support can be found in the specification on page 8, lines 17-29. Zdybel fails to teach an authentication token including one of encrypted image data and hashed encrypted image data and instead teaches "glyph encodings," which are encodings representing distinctive markings with at least two distinguishable, machine-readable states that can be used to recover data (Col. 8, lines 40-47).

Accordingly, a *prima facie* case of obviousness has not been shown for the Group I claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

5.   Patentability of Group II Claims

First, there is no suggestion or motivation to modify or combine Zdybel and Holloway, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Zdybel teaches combining hardcopy output and electronic documents into a lossless communications medium (Abstract; Col. 4, lines 20-41) by encoding bit-level digital data content into glyph encodings (Col. 8, lines 38-50). The glyph encodings are not encoded or intended to provide authentication of the underlying hardcopy document. Rather, the glyph encodings represent the digital data content of ASCII, DDL or PDL encodings, which are determined by using recognition software to extract semantic information in the form of bit-level digital data contents from a document (Col. 7, line 66-Col. 8, line 4). A machine readable digital representation and a human readable rendering are then created on the same recording media using the same printing process (Col. 4, lines 45-51).

Holloway teaches providing authentication of a document by attaching an authentication code to the original document (Col. 2, lines 5-7; Col. 4, lines 53-56; Col. 5, lines 44-55). The authentication code is based on a digital signature that derives from hash values applied to a digital form of segment contents (Col.

5   4, lines 35-56). The segments are separately reproducible from digital form and the digital forms of the segments can include a manually entered name for a company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15).

One of ordinary skill in the art would not find a suggestion or motivation

10   to modify or combine Zdybel with Holloway. Zdybel teaches robust and reliable recovery of information carried in hardcopy documents when transformed into an electronic format. Holloway teaches a process of validation that generates an appropriate digital form for each type of data contained in a document, wherein segments that failed can be checked for damage or other conditions calling

15   authenticity into question. Thus, the Zdybel and Holloway references are being improperly combined without a proper showing of a teaching or motivation to combine. MPEP § 2143.01 "The mere fact that prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggests the desirability of the modification. *In re Fritch*, 974 F.2d

20   1260 (Fed. Cir. 1992).

Second, there would not be reasonable expectation of success. The expectation of success must be founded in the prior art and not in the applicant's disclosure. *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988). Zdybel teaches creating a lossless communications medium, whereas Holloway teaches

25   authenticating printed documents. More specifically, Holloway teaches generating an authentication code containing a digital signature calculated from hashes of individual hash values for digital forms of segments, whereas Zdybel teaches encoding bit-level digital data content into glyph encodings that can be used to recover data. Combining the teachings of Zdybel with the teachings of

30   Holloway would thus provide a lossless printed document that substituted an

authentication code for glyph encodings. However, each individual hash would potentially require a separate authentication rule and, as a result, the combination would fail to provide a method for authenticating a hardcopy document, per the Group II claims.

5   Finally, the combined Zdybel and Holloway references fail to teach or suggest all the claim limitations. The Group II claims recite generating <u>lossy</u> compressed image data with the scanned representation of the hardcopy document. Support can be found in the specification on page 7, lines 11-19. In contrast, Holloway fails to teach or suggest lossy compressed image data and

10   instead teaches creating a range of digital forms of the segments, which include a manually entered name for a company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15). Although Holloway does teach creating a compressed image, Holloway implicitly teaches away from *lossy* compression, which would

15   not allow assurances of authenticity between the reproduced image and the original image. *See, e.g.,* Col. 2, lines 17-35 ("one segment may contain encoded information such as a photograph or a diagram which could be almost infinitely varied without noticeable change to the human eye"); Col. 8, lines 7-11.

        The Group II claims also recite producing an authentication token with the

20   lossy compressed image data; the authentication token including one of encrypted image data and hashed encrypted image data; and the hashed encrypted image data including the lossy compressed image data and an encrypted hash of the lossy compressed image data. Support can be found in the specification on page 8, lines 1-16. In contrast, Holloway fails to teach or suggest an authentication token

25   including one of encrypted image data or hashed encrypted image data and instead teaches an authentication code containing the digital signature of the document, and the hash value, rules and digital form of each segments contents (Col. 4, lines 53-56). Although Holloway does teach creating a compressed image, Holloway implicitly teaches away from *encrypted* image data, as individual segment

30   encryption would be unnecessary in light of the digital signature taken over the

over the set of hash values for each individual segment. *See, e.g.,* (Col. 4, lines 41-44).

Lastly, the Group II claims recite arranging in the memory a digital encoding of the authentication data for rendering at a printer a label containing the digital encoding of the authentication data. Support can be found in the specification on page 8, lines 17-29. Zdybel fails to teach an authentication token including one of encrypted image data and hashed encrypted image data and instead teaches "glyph encodings," which are encodings representing distinctive markings with at least two distinguishable, machine-readable states that can be used to recover data (Col. 8, lines 40-47).

Accordingly, a *prima facie* case of obviousness has not been shown for the Group II claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

6. Patentability of Group III Claims

First, there is no suggestion or motivation to modify or combine Zdybel and Holloway, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Zdybel teaches combining hardcopy output and electronic documents into a lossless communications medium (Abstract; Col. 4, lines 20-41) by encoding bit-level digital data content into glyph encodings (Col. 8, lines 38-50). The glyph encodings are not encoded or intended to provide authentication of the underlying hardcopy document. Rather, the glyph encodings represent the digital data content of ASCII, DDL or PDL encodings, which are determined by using recognition software to extract semantic information in the form of bit-level digital data contents from a document (Col. 7, line 66-Col. 8, line 4). A machine readable digital representation and a human readable rendering are then created on the same recording media using the same printing process (Col. 4, lines 45-51).

Holloway teaches providing authentication of a document by attaching an authentication code to the original document (Col. 2, lines 5-7; Col. 4, lines 53-

56; Col. 5, lines 44-55). The authentication code is based on a digital signature that derives from hash values applied to a digital form of segment contents (Col. 4, lines 35-56). The segments are separately reproducible from digital form and the digital forms of the segments can include a manually entered name for a

5   company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15).

One of ordinary skill in the art would not find a suggestion or motivation to modify or combine Zdybel with Holloway. Zdybel teaches robust and reliable recovery of information carried in hardcopy documents when transformed into an

10   electronic format. Holloway teaches a process of validation that generates an appropriate digital form for each type of data contained in a document, wherein segments that failed can be checked for damage or other conditions calling authenticity into question. Thus, the Zdybel and Holloway references are being improperly combined without a proper showing of a teaching or motivation to

15   combine. MPEP § 2143.01 "The mere fact that prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggests the desirability of the modification. *In re Fritch*, 974 F.2d 1260 (Fed. Cir. 1992).

Second, there would not be reasonable expectation of success. The

20   expectation of success must be founded in the prior art and not in the applicant's disclosure. *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988). Zdybel teaches creating a lossless communications medium, whereas Holloway teaches authenticating printed documents. More specifically, Holloway teaches generating an authentication code containing a digital signature calculated from

25   hashes of individual hash values for digital forms of segments, whereas Zdybel teaches encoding bit-level digital data content into glyph encodings that can be used to recover data. Combining the teachings of Zdybel with the teachings of Holloway would thus provide a lossless printed document that substituted an authentication code for glyph encodings. However, each individual hash would

30   potentially require a separate authentication rule and, as a result, the combination

would fail to provide a system for authenticating a scanned representation of a hardcopy document, per the Group III claims.

Finally, the combined Zdybel and Holloway references fail to teach or suggest all the claim limitations. The Group III claims recite an image

5 compression module for generating lossy compressed image data with the scanned representation of the hardcopy document. Support can be found in the specification on page 7, lines 11-19. In contrast, Holloway fails to teach or suggest lossy compressed image data and instead teaches creating a range of digital forms of the segments, which include a manually entered name for a

10 company logo, decoded ASCII, coordinates of manually removed lines, or an image of pictures, diagrams or signatures (Col. 7, line 43-Col. 8, line 15). Although Holloway does teach creating a compressed image, Holloway implicitly teaches away from *lossy* compression, which would not allow assurances of authenticity between the reproduced image and the original image. *See, e.g.,* Col.

15 2, lines 17-35 ("one segment may contain encoded information such as a photograph or a diagram which could be almost infinitely varied without noticeable change to the human eye"); Col. 8, lines 7-11.

The Group III claims also recite an authentication token generator for producing an authentication token with the lossy compressed image data; the

20 authentication token including one of encrypted image data and hashed encrypted image data; the hashed encrypted image data including the lossy compressed image data and an encrypted hash of the lossy compressed image data. Support can be found in the specification on page 8, lines 1-16. In contrast, Holloway fails to teach or suggest an authentication token including one of encrypted image data

25 or hashed encrypted image data and instead teaches an authentication code containing the digital signature of the document, and the hash value, rules and digital form of each segments contents (Col. 4, lines 53-56). Although Holloway does teach creating a compressed image, Holloway implicitly teaches away from *encrypted* image data, as individual segment encryption would be unnecessary in

30 light of the digital signature taken over the over the set of hash values for each

individual segment. *See, e.g.,* (Col. 4, lines 41-44).

Lastly, the Group III claims recite an encoding module for arranging the scanned representation of the hardcopy document with a digital encoding of the authentication token for rendering at a printer a signed and authenticated hardcopy

5   document. Support can be found in the specification on page 8, lines 17-29. Zdybel fails to teach an authentication token including one of encrypted image data and hashed encrypted image data and instead teaches "glyph encodings," which are encodings representing distinctive markings with at least two distinguishable, machine-readable states that can be used to recover data (Col. 8,

10   lines 40-47).

Accordingly, a *prima facie* case of obviousness has not been shown for the Group III claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

B.   *Second Rejection Under 35 U.S.C. § 103(a) (Issue II).*

15   Claims 2-5, 20 and 22 stand rejected under 35 U.S.C. § 103(a) as obvious over Zdybel in view of Holloway and further in view of Merkle. To establish a *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference

20   teachings; (2) there must be a reasonable expectation of success; and (3) the combined references must teach or suggest all the claim limitations. MPEP § 2143. The combination of Zdybel, Holloway and Merkle fail to render Claims 2-5, 20 and 22 obvious. Applicant traverses the rejection.

A *prima facie* case of obviousness has not been shown for Claims 2-5, 20

25   and 22. The claim groupings will first be summarized, followed by a discussion of the patentability of claim Groups I, II and III.

1.   Grouping of Claims

Group I consists of claims 2-5, which define a method for authenticating a hardcopy document. Support can be found in the specification on page 6, line 13

through page 9, line 13. In particular, claim 1, upon which claims 2-5 are dependent, recites arranging in a memory a scanned representation of a hardcopy document and a digital encoding of an authentication token for rendering a signed and authenticated hardcopy document. The authentication token is encoded using

5   embedded digital data that is machine readable only. *See, e.g.,* Spec. page 8, lines 17-22. As claims 2-5 recite a method with steps supportable by the specification distinctively from other apparatus and method claims, Group I properly states a separately patentable claim group.

Group II consists of claim 20, which defines a method for authenticating a

10   hardcopy document. Support can be found in the specification on page 13, line 14 through page 17, line 21. In particular, claim 18, upon which claim 20 is dependent, recites arranging in a memory a digital encoding of authentication data for rendering a *label* containing a digital encoding of the authentication data. *See, e.g.,* Spec. page 15, line 21 through page 16, line 11 ("notary stamp 612"). In

15   contrast, claim 1 renders a signed and authenticated *hardcopy document*. As claim 20 recites a method with steps supportable by the specification distinctively from other apparatus and method claims, Group II properly states a separately patentable claim group.

Group III consists of claim 22, which defines a system for authenticating a

20   scanned representation of a hardcopy document. Support can be found in the specification on page 5, line 3 through page 6, line 11. As claim 22 recites an apparatus with elements supportable by the specification distinctively from the other apparatus and method claims, Group III properly states a separately patentable claim group.

25   2.   Patentability of Group I Claims

As described above with reference to the rejection under 35 U.S.C. § 103(a) of Claims 1-7, 11-19, 21 and 23, a *prima facie* case of obviousness has not been shown. Claims 2-5 are dependent on Claim 1 and are patentable for the above-stated reasons, and as further distinguished by the limitations recited

therein. Accordingly, a *prima facie* case of obviousness has not been shown for the Group I claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

3. Patentability of Group II Claims

5   As described above with reference to the rejection under 35 U.S.C. § 103(a) of Claims 1-7, 11-19, 21 and 23, the base reference, a *prima facie* case of obviousness has not been shown. Thus, there would be no suggestion or motivation to modify the reference or combine the reference teachings nor would there be a reasonable expectation of success. Claim 20 is dependent on Claim 18

10 and is patentable for the above-stated reasons, and as further distinguished by the limitations recited therein. Accordingly, a *prima facie* case of obviousness has not been shown for the Group II claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

4. Patentability of Group III Claims

15 As described above with reference to the rejection under 35 U.S.C. § 103(a) of Claims 1-7, 11-19, 21 and 23, the base reference, a *prima facie* case of obviousness has not been shown. Thus, there would be no suggestion or motivation to modify the reference or combine the reference teachings nor would there be a reasonable expectation of success. Claim 22 is dependent on Claim 21

20 and is patentable for the above-stated reasons, and as further distinguished by the limitations recited therein. Accordingly, a *prima facie* case of obviousness has not been shown for the Group III claims and withdrawal of the rejection for obviousness under 35 U.S.C. 103(a) is requested.

C.   *Third Rejection Under 35 U.S.C. § 103(a) (Issue III).*

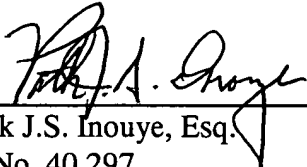25 This item is incorporated by reference from the earlier-filed Appeal Brief.

9. CONCLUSION

In view of the foregoing arguments, Applicant respectfully submits that

the rejections under 35 U.S.C. §103(a) cannot be sustained and should be

withdrawn. Reconsideration of the pending claims and a Notice of Allowance is

respectfully solicited.

   Please contact the undersigned at (206) 381-3900 regarding any questions

5   or concerns associated with the present matter.

Dated: July 22, 2004   By: _____

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   Supp Appeal Brief

10. APPENDIX

This item is incorporated by reference from the earlier-filed Appeal Brief.